

CLAIMS:

A I Claim:

1. A communication system comprising a control device, one or more communication terminals, and a communication device which connects the control device with the one or more communication terminals, and has one or more communication protocol modules for controlling communications of the one or more communication terminals based on control information from the control device, characterized in that the communication device includes:

a memory which temporarily stores the control information sent from the control device, sequentially;

control information acquisition means which sequentially acquires the control information temporarily stored in the memory and broadcasts it to the one or more communication protocol modules; and

one or more detection means each being provided in correspondence with each of the one or more communication protocol modules at a front stage on an input side of each of the communication protocol modules, for detecting whether the control information broadcasted by the control information acquisition means needs to be processed by each of the one or more communication protocol modules, and that

the one or more communication protocol modules implement processing of the control information if a corresponding one or more detection means detect that the control information is meant to be processed by an own communication protocol module.

2. A communication system according to claim 1 characterized in that the control information acquisition means and the one or more detection means corresponding to the one or more communication protocol modules are connected through a bus.

A 3. A communication system according to claim 1 ~~or 2~~ characterized in that each of the one or more communication protocol modules is constituted for each of processing categories of the control information.

A 4. A communication system according to ~~either one of claim 1, 2 or 3~~ characterized in that:

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the memory has ^{a control space} for temporarily ^{storing} control information from the control device to the one or more protocol modules and a status space for temporarily storing status information from the one or more protocol modules to the control device, and that:

the control device writes the control information into the control space of the memory and reads the status information from the status space of the memory.

5. A communication system according to claim 4 characterized in that:

the control information written to the control space is comprised of a command number and command data, and that:

the control device temporarily stores at least a pair of the command number and the command data into the memory sequentially.

6. A communication system according to claim 5 characterized in that:

the control space is comprised of a command space which consists of pairs of the command number and the command data both made up of a fixed unit of information and a data space for temporarily storing the command data if the command data exceeds the fixed unit of information, and that:

the control device, if the command data exceeds the fixed unit of information, writes information corresponding to an address within the data space where the command data is temporarily stored, instead of the command data that pairs with the command number, and also writes to a head of the command data stored in the data space information corresponding to a data length in the fixed unit of information, in which a content of the command data is temporarily stored.

7. A communication system according to claim 6 characterized in that:

the information which corresponds to the address written in the fixed units of information and the information which corresponds to the data length, both are a virtual address or a virtual data length formed by shifting values by a fixed amount, and that:

the control device processes the virtual address or the virtual data length as an address or a data length that was reverse shifted by a fixed amount.

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